AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph on page 4, line 4 through page 5, line 16 as follows:

Fig. 10 is a diagram showing sensitivity distribution within a cell along the horizontal direction in the pixel of the general AF sensor. The sensitivity at the center of each of photodiodes 110-1 to 110-5 serving as pixels is the highest. As the position approaches the pixel edge, the sensitivity deteriorates and the sensitivity in an isolation region 128 is low. Fig. 11 shows a relation between an object image formed on the photodiode 110-3 and outputs from the AF sensor regarding the photodiodes 110-1 to 110-5. In Fig. 11, the object image is formed at almost the center of the photodiode 110-3, so that the output of the photodiode 110-3 is the largest. The signals of the photodiodes 110-2 and 110-4 adjacent to the photodiode 110-3 are outputted at a certain ratio due to crosstalks from the photodiode 110-3. If the object image is formed in the isolation region between the photodiodes 110-3 and 110-4 as shown in Fig. 12, since magnitudes of the outputs of the photodiodes 110-3 and 110-4 are almost equal, it is determined to be unspecified ~~that~~ in which pixel on the right or left side of the isolation region a peak of the object image is located. Thus, even if the same object is auto-focused, an arithmetic operation result differs every time. To reduce such an influence, it is preferable to reduce the horizontal pixel pitch. For example, if the pixel pitch is reduced to ~~the~~ half, a focusing error is also reduced to about ~~the~~ half. However, since the sensitivity deteriorates if the pixel pitch is simply reduced, there is a case where the AF itself cannot be performed at the time of low luminance. To reduce the pixel pitch without deteriorating the sensitivity, it is required to introduce a fine-patterning process. However, since a long developing period of time and very

high developing costs are necessary to accomplish the fine-patterning process, it is difficult to develop the solid-state image pickup device for the AF with low costs in a short period of time.

Please amend the paragraph on page 6, line 2 through page 7, line 2 as follows:

To accomplish the above objects, according to the invention, there is provided a solid-state image pickup device for an auto-focus comprising first and second linear sensor pairs each having a linear sensor for a base portion with a plurality of pixels and a linear sensor for a reference portion with a plurality of pixels in order to perform a focal point detection of a TTL passive-type phase detection system, wherein the first linear sensor pair and the second linear sensor pair have the same pixel pitch, the first linear sensor pair and the second linear sensor pair are neighboring in parallel and are arranged so as to be relatively deviated in the arranging direction of the linear sensor for the base portion and the linear sensor for the reference portion (zigzag layout), and a signal output to detect the focal point is executed by using both of the first linear sensor pair and the second linear sensor pair. In the construction of the invention, in the case where the object image is formed in the isolation region of one linear sensor pair and the detection result becomes unstable, the focal point can be detected by the other linear sensor pair in which the pixels have been deviated, so that the deterioration of the focusing precision can be eliminated. By equivalently reducing the pixel pitch to ~~the~~ half, the focusing precision can be also improved.

Please amend the paragraph on page 11, lines 13 through 26 as follows:

Although the light shielding layer 43 is formed so as to shield the resetting MOS transistor and the differential amplifier from the light, no light shielding layers are formed between the photodiode arrays 2-1 and 2-2 and between the photodiode arrays 2-3 and 2-4. The reason why the light shielding layers are not formed is to reduce a non-sensitive region to be as small as possible, thereby allowing the photodiode arrays to be neighboring. This is also because if the photodiode arrays are away, a positional deviation occurs and it is difficult to detect a fine pattern. If the light shielding layer is narrow, there is not particularly a problem even when the dead zone region exists.

Please amend the paragraph on page 12, lines 5 through 10 as follows:

The AF linear sensor circuit (CMOS linear type AF sensor) shown here is the circuit proposed ~~before~~ previously by the applicant of the present invention in Japanese Patent Application Laid-Open No. 2000-180706 or the like. The AF linear sensor circuit is constructed by a plurality of AF sensor units.

Please amend the paragraph on page 15, line 13 through page 16, line 10 as follows:

In the construction of the present circuit, by providing the feedback type noise clamp circuits at the front stage of the maximum value detection circuit and the minimum value detection circuit, the reset noises which are generated in the photodiodes and the FPN which are generated in the sensor amplifiers, the maximum value detection circuit, and the minimum value detection circuit can be eliminated. The voltage follower circuit whose final output stage is a

source follower circuit is constructed for every pixel, the constant current source at the output stage of each voltage follower is turned off at the time of the output of the minimum value, and the voltage follower circuits are connected in common to an output line connected to the constant current source, so that the minimum value of the AF sensor signal can be obtained. At the time of the output of the AF sensor signal, by turning on the constant current source at the output stage of each voltage follower and sequentially connecting the voltage follower circuits to the output line, the serial AF sensor signal can be obtained. Since the minimum value detection circuit is also used in common as a signal outputting circuit by the above operation, the chip can be miniaturized.

Please amend the paragraph on page 16, line 16 through page 17, line 10 as follows:

In Fig. 4, reference numeral 41 denotes an isolation region and 42 a slit light. In a sensor shown in Fig. 12, if the object image is formed on the isolation region, the operation becomes unstable. However, in the case of constructing as shown in Fig. 4, the object image is formed on the isolation region between the photodiodes 40-L3 and 40-L4 of the photodiode array 2-2. Even if it is unknown that the peak of the object image exists in which one of the right and left diodes of the isolation region, the object image is formed on the photodiode 40-U3 in the other photodiode array 2-1 and the peak position is unconditionally determined, so that the operation does not become unstable. Usually, since the signal process can be executed by using both of the linear sensor outputs, another effect in which the S/N ratio is multiplied by ~~/2~~ ½ is also obtained. Therefore, the AF precision and detecting sensitivity which are higher than those

of the conventional device can be obtained even in the case of the same pixel size as that of the conventional device without an unreasonable decrease in pixel pitch.